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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/7692, 668	10/20/00	MUKAI	T 36856.366

MM91/0618

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EXAMINER

GONZALEZ, J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/692,668	MUKAI ET AL.
	Examiner	Art Unit
	Julio C. Gonzalez	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-18 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claims \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 20 October 2000 is/are objected to by the Examiner.  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

15) Notice of References Cited (PTO-892)  
 16) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.  
 18) Interview Summary (PTO-413) Paper No(s) \_\_\_\_.  
 19) Notice of Informal Patent Application (PTO-152)  
 20) Other: \_\_\_\_.

## DETAILED ACTION

### ***Specification***

✓ 1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Surface acoustic wave device having two electrodes between grooves, a distance L of about  $8\lambda$  or less and a distance H of about  $2\lambda$  to  $6\lambda$ .

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ladder type filter, resonator filter and transversely resonator filter disclosed in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant needs to clarify the term "substantially equal to about  $8\lambda$  or less". Is the statement means that the distance could be larger than  $8\lambda$ ? Only less than  $8\lambda$ ? How low can the wavelength be reduce without affecting the device or operating under

✓ desired conditions? In claim 2, the statement "about  $2\lambda$  to about  $6\lambda$ " needs more clarification.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4-7, 10, 11 and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ago et al.

Ago et al discloses a surface acoustic wave device comprising a piezoelectric substrate 5 having a pair of edges, an interdigital transducer 4 provided on main region wherein a distance L is between at least one inner edge and corresponding one of the substrate edges is equal to about  $8\lambda$  or less (column 5, lines 47-49). Also, the inner edge has a height H in the range of about  $2\lambda$  to about  $6\lambda$ . Moreover the IDT has a plurality of electrode fingers (see figure 2 and column 2, lines 7-11).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 8, 9, 12, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ago et al in view of Kadota et al.

Ago et al discloses a surface acoustic wave device comprising a piezoelectric substrate 5 having a pair of edges, an interdigital transducer 4 provided on main region wherein a distance L is between at least one inner edge and corresponding one of the substrate edges is equal to about  $8\lambda$  or less (column 5, lines 47-49). Also, the inner edge has a height H in the range of about  $2\lambda$  to about  $6\lambda$ . Moreover the IDT has a plurality of electrode fingers (see figure 2 and column 2, lines 7-11).

However, Ago et al does not disclose the use of two electrodes or filters.

On the other hand, Kadota et al discloses for the purpose of improving insertion loss and reducing resonance resistant that the surface acoustic wave device has two electrodes (see figure 2) and it has resonance filters (column 8, lines 29-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a surface acoustic device comprising an IDT, a plurality of electrodes and the piezoelectric substrate having grooves as disclosed by Ago et al and to modify the invention by having filters and two IDT's for the purpose of improving insertion loss and reducing resonance resistant as disclosed by Kadota et al.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Jcg

June 14, 2001

FORM PTO-1449 (MODIFIED)	ATTY. DOCKET NO. 36856.366	SERIAL NO. : Currently unknown
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANTS INFORMATION DISCLOSURE STATEMENT  (USE SEVERAL SHEETS IF NECESSARY)	APPLICANT(S): Takao MUKAI et al.	
	FILING DATE: Concurrently herewith	GROUP: 2834

JC825 U.S. PTO  
09/692668

Reference Designation

U.S. Patents

Examiner Initial	Document Number	Date	Name	Class	Filing Date Subclass if appropriate
	AA				
	AB				
	AC				
	AD				
	AE				
	AF				
	FOREIGN PATENT DOCUMENTS				
	Document Number	Date	Country	Class	Filing Date Subclass if appropriate
AG	7-263998	10/1995	Japan		
AH	4-82315	3/1992	Japan		
AI					
AJ					
AK					
AL					
AM					
AN					
A0					

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

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EXAMINER

DATE CONSIDERED

06/13/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.